

SEQUENCE LISTING

<110> Luo, Ying
Mancebo, Helena

<120> NOVEL SYK KINASE-ASSOCIATED CELL CYCLE PROTEINS, COMPOSITIONS, AND METHODS OF USE

<130> A-68412-1/RMS/DHR

<140> US 10/088,960
<141> 2002-03-22

<150> US 09/404,967
<151> 1999-09-24

<150> PCT/US 00/26338
<151> 2000-09-25

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<170> PatentIn version 3.1

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<223> "Xaa" at position 373 can be any amino acid.

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 405 410 415

Glu Glu Ile Lys Arg Leu Lys Asp Tyr Leu Thr Val Leu Gln Gln Arg
 420 425 430

Leu Glu Arg Tyr Leu Ser Tyr Gly Ser Gly Pro Lys Arg Phe Pro Leu
 435 440 445

Val Asp Val Leu Gln Tyr Ala Leu Glu Phe Ala Ser Ser Lys Pro Val
 450 455 460

Cys Thr Ser Pro Val Asp Asp Ile Asp Ala Ser Ser Pro Pro Ser Gly
 465 470 475 480

Ser	Ile	Pro	Ser	Gln	Thr	Leu	Pro	Ser	Thr	Thr	Glu	Gln	Gln	Gly	Ala	
				485					490					495		
Leu	Ser	Ser	Glu	Leu	Pro	Ser	Thr	Ser	Pro	Ser	Ser	Val	Ala	Ala	Ile	
			500					505					510			
Ser	Ser	Arg	Ser	Val	Ile	His	Lys	Pro	Phe	Thr	Gln	Ser	Arg	Ile	Pro	
		515					520					525				
Pro	Asp	Leu	Pro	Met	His	Pro	Ala	Pro	Arg	His	Ile	Thr	Glu	Glu	Glu	
	530					535					540					
Leu	Ser	Val	Leu	Glu	Ser	Cys	Leu	His	Arg	Trp	Arg	Thr	Glu	Ile	Glu	
545					550					555					560	
Asn	Asp	Thr	Arg	Asp	Leu	Gln	Glu	Ser	Ile	Ser	Arg	Ile	His	Arg	Thr	
			565						570					575		
Ile	Glu	Leu	Met	Tyr	Ser	Asp	Lys	Ser	Met	Ile	Gln	Val	Pro	Tyr	Arg	
		580					585						590			
Leu	His	Ala	Val	Leu	Val	His	Glu	Gly	Gln	Ala	Asn	Ala	Gly	His	Tyr	
		595					600					605				
Trp	Ala	Tyr	Ile	Phe	Asp	His	Arg	Glu	Ser	Arg	Trp	Met	Lys	Tyr	Asn	
	610					615					620					
Asp	Ile	Ala	Val	Thr	Lys	Ser	Ser	Trp	Glu	Glu	Leu	Val	Arg	Asp	Ser	
	625				630					635					640	
Phe	Gly	Gly	Tyr	Arg	Asn	Ala	Ser	Ala	Tyr	Cys	Leu	Met	Tyr	Ile	Asn	
			645						650					655		
Asp	Lys	Ala	Gln	Phe	Leu	Ile	Gln	Glu	Glu	Phe	Asn	Lys	Glu	Thr	Gly	
		660					665						670			
Gln	Pro	Leu	Val	Gly	Ile	Glu	Thr	Leu	Pro	Pro	Asp	Leu	Arg	Asp	Phe	
		675					680					685				
Val	Glu	Glu	Asp	Asn	Gln	Arg	Phe	Glu	Lys	Glu	Leu	Glu	Glu	Trp	Asp	
		690				695					700					
Ala	Gln	Leu	Ala	Gln	Lys	Ala	Leu	Gln	Glu	Lys	Leu	Leu	Ala	Ser	Gln	
	705				710					715					720	

Lys	Leu	Arg	Glu	Ser	Glu	Thr	Ser	Val	Thr	Thr	Ala	Gln	Ala	Ala	Gly	725	730	735	
Asp	Pro	Glu	Tyr	Leu	Glu	Gln	Pro	Ser	Arg	Ser	Asp	Phe	Ser	Lys	His	740	745	750	
Leu	Lys	Glu	Glu	Thr	Ile	Gln	Ile	Ile	Thr	Lys	Ala	Ser	His	Glu	His	755	760	765	
Glu	Asp	Lys	Ser	Pro	Glu	Thr	Val	Leu	Gln	Ser	Ala	Ile	Lys	Leu	Glu	770	775	780	
Tyr	Ala	Arg	Leu	Val	Lys	Leu	Ala	Gln	Glu	Asp	Thr	Pro	Pro	Glu	Thr	785	790	795	800
Asp	Tyr	Arg	Leu	His	His	Val	Val	Val	Tyr	Phe	Ile	Gln	Asn	Gln	Ala	805	810	815	
Pro	Lys	Lys	Ile	Ile	Glu	Lys	Thr	Leu	Leu	Glu	Gln	Phe	Gly	Asp	Arg	820	825	830	
Asn	Leu	Ser	Phe	Asp	Glu	Arg	Cys	His	Asn	Ile	Met	Lys	Val	Ala	Gln	835	840	845	
Ala	Lys	Leu	Glu	Met	Ile	Lys	Pro	Glu	Glu	Val	Asn	Leu	Glu	Glu	Tyr	850	855	860	
Glu	Glu	Trp	His	Gln	Asp	Tyr	Arg	Lys	Phe	Arg	Glu	Thr	Thr	Met	Tyr	865	870	875	880
Leu	Ile	Ile	Gly	Leu	Glu	Asn	Phe	Gln	Arg	Glu	Ser	Tyr	Ile	Asp	Ser	885	890	895	
Leu	Leu	Phe	Leu	Ile	Cys	Ala	Tyr	Gln	Asn	Asn	Lys	Glu	Leu	Leu	Ser	900	905	910	
Lys	Gly	Leu	Tyr	Arg	Gly	His	Asp	Glu	Glu	Leu	Ile	Ser	His	Tyr	Arg	915	920	925	
Arg	Glu	Cys	Leu	Leu	Ile	Leu	Asn	Leu	Lys	Arg	Lys	Gln	Lys	Pro	Ile	930	935	940	
Leu	Phe	Phe	Phe	Leu	His	Cys	Ile	Lys	Lys	Leu	Asn	Glu	Gln	Ala	Ala	945	950	955	960

Glu Leu Phe Glu Ser Gly Glu Asp Arg Glu Val Asn Asn Gly Leu Ile
 965 970 975

Ile Met Asn Glu Phe Ile Val Pro Phe Leu Pro Leu Leu Val Asp
 980 985 990

Glu Met Glu Glu Lys Asp Ile Leu Ala Val Glu Asp Met Arg Asn Arg
 995 1000 1005

Trp Cys Ser Tyr Leu Gly Gln Glu Met Glu Pro His Leu Gln Glu
 1010 1015 1020

Lys Leu Thr Asp Phe Leu Pro Lys Leu Leu Asp Cys Ser Met Glu
 1025 1030 1035

Ile Lys Ser Phe His Glu Pro Pro Lys Leu Pro Ser Tyr Ser Thr
 1040 1045 1050

His Glu Leu Cys Glu Arg Phe Ala Arg Ile Met Leu Ser Leu Ser
 1055 1060 1065

Arg Thr Pro Ala Asp Gly Arg
 1070 1075

<210> 5
 <211> 834
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC_FEATURE
 <222> (373)..(373)
 <223> "Xaa" at position 373 can be any amino acid.

<400> 5

Met Thr Val Glu Gln Asn Val Leu Gln Gln Ser Ala Ala Gln Lys His
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Gln Gln Thr Phe Leu Asn Gln Leu Arg Glu Ile Thr Gly Ile Asn Asp
 20 25 30

Thr Gln Ile Leu Gln Gln Ala Leu Lys Asp Ser Asn Gly Asn Leu Glu
 35 40 45

Leu Ala Val Ala Phe Leu Thr Ala Lys Asn Ala Lys Thr Pro Gln Gln
 50 55 60

15

Glu	Glu	Thr	Thr	Tyr	Tyr	Gln	Thr	Ala	Leu	Pro	Gly	Asn	Asp	Arg	Tyr	65	70	75	80
Ile	Ser	Val	Gly	Ser	Gln	Ala	Asp	Thr	Asn	Val	Ile	Asp	Leu	Thr	Gly	85	90	95	
Asp	Asp	Lys	Asp	Asp	Leu	Gln	Arg	Thr	Ile	Ala	Leu	Ser	Leu	Ala	Glu	100	105	110	
Ser	Asn	Arg	Ala	Phe	Arg	Glu	Thr	Gly	Ile	Thr	Asp	Glu	Glu	Gln	Ala	115	120	125	
Ile	Ser	Arg	Val	Leu	Glu	Ala	Ser	Ile	Ala	Glu	Asn	Lys	Ala	Cys	Leu	130	135	140	
Lys	Arg	Thr	Pro	Thr	Glu	Val	Trp	Arg	Asp	Ser	Arg	Asn	Pro	Tyr	Asp	145	150	155	160
Arg	Lys	Arg	Gln	Asp	Lys	Ala	Pro	Val	Gly	Leu	Lys	Asn	Val	Gly	Asn	165	170	175	
Thr	Cys	Trp	Phe	Ser	Ala	Val	Ile	Gln	Ser	Leu	Phe	Asn	Leu	Leu	Glu	180	185	190	
Phe	Arg	Arg	Leu	Val	Leu	Asn	Tyr	Lys	Pro	Pro	Ser	Asn	Ala	Gln	Asp	195	200	205	
Leu	Pro	Arg	Asn	Gln	Lys	Glu	His	Arg	Asn	Leu	Pro	Phe	Met	Arg	Glu	210	215	220	
Leu	Arg	Tyr	Leu	Phe	Ala	Leu	Leu	Val	Gly	Thr	Lys	Arg	Lys	Tyr	Val	225	230	235	240
Asp	Pro	Ser	Arg	Ala	Val	Glu	Ile	Leu	Lys	Asp	Ala	Phe	Lys	Ser	Asn	245	250	255	
Asp	Ser	Gln	Gln	Gln	Asp	Val	Ser	Glu	Phe	Thr	His	Lys	Leu	Leu	Asp	260	265	270	
Trp	Leu	Glu	Asp	Ala	Phe	Gln	Met	Lys	Ala	Glu	Glu	Glu	Thr	Asp	Glu	275	280	285	
Glu	Lys	Pro	Lys	Asn	Pro	Met	Val	Glu	Leu	Phe	Tyr	Gly	Arg	Phe	Leu	290	295	300	

Ala Val Gly Val Leu Glu Gly Lys Lys Phe Glu Asn Thr Glu Met Phe			
305	310	315	320
Gly Gln Tyr Pro Leu Gln Val Asn Gly Phe Lys Asp Leu His Glu Cys			
	325	330	335
Leu Glu Ala Ala Met Ile Glu Gly Glu Ile Glu Ser Leu His Ser Glu			
	340	345	350
Asn Ser Gly Lys Ser Gly Gln Glu His Trp Phe Thr Gly Leu Pro Pro			
	355	360	365
Val Leu Thr Phe Xaa Leu Ser Arg Phe Glu Phe Asn Gln Ala Leu Gly			
	370	375	380
Arg Pro Glu Lys Ile His Asn Lys Leu Glu Phe Pro Gln Val Leu Tyr			
	385	390	395
Leu Asp Arg Tyr Met His Arg Asn Arg Glu Ile Thr Arg Ile Lys Arg			
	405	410	415
Glu Glu Ile Lys Arg Leu Lys Asp Tyr Leu Thr Val Leu Gln Gln Arg			
	420	425	430
Leu Glu Arg Tyr Leu Ser Tyr Gly Ser Gly Pro Lys Arg Phe Pro Leu			
	435	440	445
Val Asp Val Leu Gln Tyr Ala Leu Glu Phe Ala Ser Ser Lys Pro Val			
	450	455	460
Cys Thr Ser Pro Val Asp Asp Ile Asp Ala Ser Ser Pro Pro Ser Gly			
	465	470	475
Ser Ile Pro Ser Gln Thr Leu Pro Ser Thr Thr Glu Gln Gln Gly Ala			
	485	490	495
Leu Ser Ser Glu Leu Pro Ser Thr Ser Pro Ser Ser Val Ala Ala Ile			
	500	505	510
Ser Ser Arg Ser Val Ile His Lys Pro Phe Thr Gln Ser Arg Ile Pro			
	515	520	525
Pro Asp Leu Pro Met His Pro Ala Pro Arg His Ile Thr Glu Glu Glu			
	530	535	540

Leu Ser Val Leu Glu Ser Cys	Leu His Arg Trp Arg Thr Glu Ile Glu
545	550 555 560
Asn Asp Thr Arg Asp Leu Gln Glu Ser Ile Ser Arg Ile His Arg Thr	
565	570 575
Ile Glu Leu Met Tyr Ser Asp Lys Ser Met Ile Gln Val Pro Tyr Arg	
580	585 590
Leu His Ala Val Leu Val His Glu Gly Gln Ala Asn Ala Gly His Tyr	
595	600 605
Trp Ala Tyr Ile Phe Asp His Arg Glu Ser Arg Trp Met Lys Tyr Asn	
610	615 620
Asp Ile Ala Val Thr Lys Ser Ser Trp Glu Glu Leu Val Arg Asp Ser	
625	630 635 640
Phe Gly Gly Tyr Arg Asn Ala Ser Ala Tyr Cys Leu Met Tyr Ile Asn	
645	650 655
Asp Lys Ala Gln Phe Leu Ile Gln Glu Glu Phe Asn Lys Glu Thr Gly	
660	665 670
Gln Pro Leu Val Gly Ile Glu Thr Leu Pro Pro Asp Leu Arg Asp Phe	
675	680 685
Val Glu Glu Asp Asn Gln Arg Phe Glu Lys Glu Leu Glu Glu Trp Asp	
690	695 700
Ala Gln Leu Ala Gln Lys Ala Leu Gln Glu Lys Leu Leu Ala Ser Gln	
705	710 715 720
Lys Leu Arg Glu Ser Glu Thr Ser Val Thr Thr Ala Gln Ala Ala Gly	
725	730 735
Asp Pro Glu Tyr Leu Glu Gln Pro Ser Arg Ser Asp Phe Ser Lys His	
740	745 750
Leu Lys Glu Glu Thr Ile Gln Ile Ile Thr Lys Ala Ser His Glu His	
755	760 765
Glu Asp Lys Ser Pro Glu Thr Val Leu Gln Ser Ala Ile Lys Leu Glu	
770	775 780

Tyr Ala Arg Leu Val Lys Leu Ala Gln Glu Asp Thr Pro Pro Glu Thr
785 790 795 800

Asp Tyr Arg Leu His His Val Val Val Tyr Phe Ile Gln Asn Gln Ala
805 810 815

Pro Lys Lys Ile Ile Glu Lys Thr Leu Leu Glu Gln Phe Gly Asp Arg
820 825 830

Asn Leu

<210> 6
<211> 9
<212> PRT
<213> Artificial

<220>
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<400> 6

Arg Thr Val Leu Gly Val Ile Gly Asp
1 5

<210> 7
<211> 9
<212> PRT
<213> Artificial

<220>
<223> synthetic

<400> 7

Arg Thr Ala Leu Gly Asp Ile Gly Asn
1 5

<210> 8
<211> 27
<212> PRT
<213> Rattus sp.

<400> 8

Tyr Met Thr Val Ser Ile Ile Asp Arg Phe Met Gln Asp Ser Cys Val
1 5 10 15

Pro Lys Lys Met Leu Gln Leu Val Gly Val Thr
20 25

<210> 9
<211> 28
<212> PRT
<213> Mus sp.

<400> 9

Lys Phe Arg Leu Leu Gln Glu Thr Met Tyr Met Thr Val Ser Ile Ile
1 5 10 15

Asp Arg Phe Met Gln Asn Ser Cys Val Pro Lys Lys
20 25

<210> 10
<211> 28
<212> PRT
<213> Mus sp.

<400> 10

Arg Ala Ile Leu Asp Ile Asp Trp Leu Ile Gln Val Gln Met Lys Phe
1 5 10 15

Arg Leu Leu Gln Glu Thr Met Tyr Met Thr Val Ser
20 25

<210> 11
<211> 26
<212> PRT
<213> Mus sp.

<400> 11

Asp Arg Phe Leu Gln Ala Gln Leu Val Cys Arg Lys Lys Leu Gln Trp
1 5 10 15

Gly Ile Thr Ala Leu Leu Leu Ala Ser Lys
20 25

<210> 12
<211> 18
<212> PRT
<213> Mus sp.

<400> 12

Met Ser Val Leu Arg Gly Lys Leu Gln Leu Val Gly Thr Ala Ala Met
1 5 10 15

Leu Leu